

BellSouth
Enforcement Measurements

ORDERING

ATTACHMENT 2

Flowthrough – OSS99

**BellSouth Flow-through Analysis
For CLECs LSRs placed via EDI or TAG**

	BellSouth Service Offered to CLEC via resale or UNE	Flow-through if no BST or CLEC Errors (Yes/No)	Complex Service (Yes/No)	Complex Order (Yes/No)	Design Service (Yes/No)	Can ordering this service cause fall out for a reason other than errors or complex? If so, what reason?
1	Flat Rate/Residence	Yes	No	No	no	
2	Flat Rate/Business	Yes	No	No	no	
3	Pay Phone Provider	No	No	No	no	
4	Measured Rate/Res.	Yes	No	No	no	
5	Measured Rate/Bus.	Yes	No	No	no	
6	Area Plus	Yes	No	No	no	
7	Package/Complete Choice and area plus	Yes	No	No	no	
8	Optional Calling Plan	Yes	No	No	no	
9	Ga. Community Calling	Yes	No	No	no	
10	Call Waiting Deluxe	Yes	No	No	no	
11	Call Waiting	Yes	No	No	no	
12	Caller ID	Yes	No	No	no	
13	Speed Calling	Yes	No	No	no	
14	3 Way Calling	Yes	No	No	no	
15	Call Forwarding-Variable	Yes	No	No	no	
16	Remote Access to CF	Yes	No	No	no	
17	Enhanced Caller ID	Yes	No	No	no	
18	Memory Call	Yes	No	No	no	
19	Memory Call Ans. Svc.	Yes	No	No	no	
20	MTS	Yes	No	No	no	
21	RCF	Yes	No	No	no	
22	Ringmaster	Yes	No	No	no	
23	Call Tracing	Yes	No	No	no	
24	Call Block	Yes	No	No	no	
25	Repeat Dialing	Yes	No	No	no	
26	Call Selector	Yes	No	No	no	
27	Call Return	Yes	No	No	no	
28	Preferred Call Forward	Yes	No	No	no	
29	Touchtone	Yes	No	No	no	
30	Visual Director	Yes	No	No	no	
31	INP (all types?)	Yes	UNE	No	no	
32	Unbundled Loop-Analog 2W, SL1, SL2	Yes	UNE	No	Yes-designed, no-non-designed	
33	2 wire analog port	Yes	UNE	No	no	
34	Local Number Portability (always?)	Yes	UNE	No	no	
35	Accupulse	No	Yes	Yes	yes	See note at bottom of matrix.
36	Basic Rate ISDN	No*	Yes	Yes	yes	LSR electronically submitted; no flow through

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	BellSouth Service Offered to CLEC via resale or UNE	Flow-through if no BST or CLEC Errors (Yes/No)	Complex Service (Yes/No)	Complex Order (Yes/No)	Design Service (Yes/No)	Can ordering this service cause fall out for a reason other than errors or complex? If so, what reason?
37	DID	No*	Yes	Yes	Yes	<i>LSR electronically submitted: no flow through.</i>
38	Frame Relay	No	Yes	Yes	yes	
39	Megalink	No	Yes	Yes	yes	
40	Megalink-T1	No	Yes	Yes	yes	
41	Native Mode LAN Interconnection (NMLI)	No	Yes	Yes	yes	
42	Pathlink Primary Rate ISDN	No	Yes	Yes	yes	
43	Synchronet	No	Yes	Yes	yes	LSR electronically submitted; no flow through
44	PBX Trunks	No	Yes	Yes	Yes	LSR electronically submitted; no flow through
45	LightGate	No	Yes	Yes	yes	
46	Smartpath	No	Yes	Yes	yes	
47a	Hunting (Multiline)	No*	Yes	no	no	LSR electronically submitted; no flow through
47b	Hunting (Series Completion)	Yes	Yes	No	No	
48	CENTREX	No	Yes	Yes	no	
49	FLEXSERV	No	Yes	Yes	yes	
50	Multiserv	No	Yes	Yes	yes	
51	Off-Prem Stations	No	Yes	Yes	yes	
52	SmartRING	No	Yes	Yes	yes	
53	FX	No	Yes	Yes	yes	
54	Tie Lines	No	Yes	Yes	Yes	
55	WATS	No	Yes	Yes	yes	
56	4 wire analog voice grade loop	No	UNE	Yes	yes- designed, no-non- designed	
57	4 wire DS1 and DS0 digital loop	No*	UNE	Yes	yes	<i>LSR electronically submitted: no flow through</i>
58	2 wire ISDN digital loop	No	UNE	Yes	yes	
59	4 wire DS1 & PRI digital loop	No	UNE	Yes	yes	
60	ADSL	No	UNE	Yes	yes	
61	HDSL	No	UNE	Yes	yes	
62	2 wire analog DID trunk port	No	UNE	Yes	Yes	

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	BellSouth Service Offered to CLEC via resale or UNE	Flow-through if no BST or CLEC Errors (Yes/No)	Complex Service (Yes/No)	Complex Order (Yes/No)	Design Service (Yes/No)	Can ordering this service cause fall out for a reason other than errors or complex? If so, what reason?
63	2 wire ISDN digital line side port	No	UNE	Yes	yes	
64	4 wire ISDN DSI digital trunk ports	No	UNE	Yes	yes	
65	UNE Combinations	y-loop+port	UNE	Yes	yes	
66	Directory Listings (simple)	Yes	UNE	Yes	no	
	BellSouth Service Offered to CLEC via resale or UNE	Flow-through if no BST or CLEC Errors (Yes/No)	Complex Service (Yes/No)	Complex Order (Yes/No)	Design Service (Yes/No)	Can ordering this service cause fall out for a reason other than errors or complex? If so, what reason?
67	Directory Listings (complex)	No*	UNE	yes	no	<i>LSR submitted electronically; no flow through</i>
68	ESSX	No	Yes	Yes	no	

Note for last column: For all services that indicate 'No' for flow-through, the following reasons, in addition to errors or complex services, also prompt manual handling: Expedites from CLECs, special pricing plans, for denials – restore and conversion or disconnect and conversion both required, partial migrations (although conversions-as-is flow through), class of service invalid in certain states with some TOS – e.g. gov't, or cannot be changed when changing main TN on C activity, low volume – e.g. activity type T=move, pending order review required, more than 25 business lines, restore or suspend for UNE combos, transfer of calls option for CLEC end user – fixed with release 6.0, new TN not yet posted to BOCRIS. All but the last one are unique to the CLEC environment.

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Enforcement Measurements

ORDERING

Report/Measurement:	
Reject Interval	
Definition:	
Reject Interval is the average reject time from receipt of an LSR to the issuance of a Reject. An LSR is considered valid when it is electronically submitted by the CLEC and passes LEO edit checks to insure the data received is correctly formatted and complete.	
Exclusions:	
Service Requests canceled by CLEC	
Business Rules:	
Fully Mechanized: The elapsed time from receipt of a valid LSR (date and time stamp in EDI, TAG) until the LSR is rejected (date and time stamp of reject in LEO). Fatal Rejects and Auto Clarifications are considered in the Fully Mechanized category.	
Calculation:	
Reject Interval = $\Sigma[(\text{Date and Time of Service Request Rejection}) - (\text{Date and Time of Service Request Receipt})] / (\text{Number of Service Requests Rejected in Reporting Period})$	
Report Structure:	
<ul style="list-style-type: none"> CLEC Specific 	
Level of Disaggregation:	
<ul style="list-style-type: none"> State 	
Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
<ul style="list-style-type: none"> Report Month Reject Interval Total Number of LSRs Total number of Errors State 	
Retail Analog/Benchmark:	
Benchmark; Retail Analog is underdevelopment	

BellSouth
Enforcement Measurements

ORDERING

Report/Measurement:	
Firm Order Confirmation Timeliness	
Definition:	
Interval for Return of a Firm Order Confirmation (FOC Interval) is the average response time from receipt of valid LSR to issuance of a firm order confirmation.	
Exclusions:	
<ul style="list-style-type: none"> Rejected LSRs Partially Mechanized or Non-Mechanized LSRs received and/or FOCd outside of normal business hours. 	
Business Rules:	
<ul style="list-style-type: none"> Mechanized - The elapsed time from receipt of a valid LSR (date and time stamp in LENS, EDI, TAG) until the LSR is processed and appropriate service orders are generated in SOCS. 	
Calculation:	
$\text{Firm Order Confirmation Timeliness} = \Sigma[(\text{Date and Time of Firm Order Confirmation}) - (\text{Date and Time of Service Request Receipt})] / (\text{Number of Service Requests Confirmed in Reporting Period})$	
Report Structure:	
<ul style="list-style-type: none"> CLEC Specific 	
Level of Disaggregation:	
<ul style="list-style-type: none"> State 	
Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
<ul style="list-style-type: none"> Report Month Interval for FOC Total number of LSRs State 	
Retail Analog/Benchmark:	
Benchmark; Retail Analog is underdevelopment	

BellSouth
Enforcement Measurements

PROVISIONING

Report/Measurement:
Percent Missed Installation Appointments
Definition:
"Percent missed installation appointments" monitors the reliability of BST commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customer as compared to BST.
Exclusions:
<ul style="list-style-type: none"> • Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) • Disconnect (D) & From (F) orders
Business Rules:
Percent Missed Installation Appointments (MA) is the percentage of total orders processed for which BST is unable to complete the service orders on the committed due dates. Missed Appointments caused by end-user reasons will be included and reported separately. A business day is any time period within the same date frame, which means there cannot be a cutoff time for commitments as certain types of orders are, requested to be worked after standard business hours. Also, during Daylight Savings Time, field technicians are scheduled until 9PM in some areas and the customer is offered a greater range of intervals from which to select.
Calculation:
Percent Missed Installation Appointments = (Number of Orders Not Complete by Committed Due Date in Reporting Period) / (Number of Orders Completed in Reporting Period) X 100
Report Structure:
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate • BST Aggregate
Report explanation: The difference between End User MA and Total MA is the result of BST caused misses. Here, Total MA is the total % of orders missed either by BST or CLEC end user and End User MA represents the percentage of orders missed by the end user
Level of Disaggregation:
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS ➢ Resale Design ➢ UNE Loop & Port Combination ➢ UNE Loops • Geographic Scope <ul style="list-style-type: none"> ➢ State

BellSouth
Enforcement Measurements

PROVISIONING (Percent Missed Installation Appointments – Continued)

Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none">• Report Month• CLEC Order Number and PON• Committed Due Date• Completion Date• Status Type• Status Notice Date• Standard Order Activity• Geographic Scope	<ul style="list-style-type: none">• Report Month• BST Order Number• Committed Due Date• Completion Date• Status Type• Status Notice Date• Standard Order Activity• Geographic Scope
Retail Analog/Benchmark:	
CLEC Resale POTS / BST Retail POTS CLEC Resale Design / BST Retail Design CLEC UNE Loop & Port Combination - Retail Analog CLEC UNE Loops – Retail Analog	

BellSouth
Enforcement Measurements

PROVISIONING

Report/Measurement :
Order Completion Interval (OCI)
Definition:
The "order completion interval" measure monitors the average time it takes BST to provide service for the CLEC or its' own customers.
Exclusions:
<ul style="list-style-type: none"> • Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) • D (Disconnect) and F (From) orders. (From is the disconnect side of a move order when the customer moves to a new address). • "L" Appointment coded orders (where the customer has requested a later than offered interval)
Business Rules:
The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from when the order is electronically entered into SOCS after the FOC on a CLEC order, or the date time stamp receipt into SOCS by BST on retail orders to the order completion date. The clock starts when a valid order number is assigned by SOCS and stops when the technician or system completes the order in SOCS. Elapsed time for each order is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the associated total number of orders completed
Calculation:
Average Completion Interval: $\Sigma [(\text{Completion Date \& Time}) - (\text{Order Issue Date \& Time})] / (\text{Count of Orders Completed in Reporting Period})$
Report Structure:
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate • BST Aggregate

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PROVISIONING –
(Average Completion Interval (OCI) – Continued)

Level of Disaggregation: <ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS (Dispatch) ➢ Resale Design (Dispatch) ➢ UNE Loop & Port Combination (No Dispatch) ➢ UNE Loops (Dispatch – W Coded Orders Only) ➢ IC Trunks (Dispatch) • Geographic Scope <ul style="list-style-type: none"> ➢ State <p>A W-code indicates orders where the CLEC accepts the offered interval</p>	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report Month • CLEC Company Name • Order Number • Submission Date & Time • Completion Date • Service Type • Geographic Scope 	<ul style="list-style-type: none"> • Report Month • BST Order Number • Order Submission Date & Time • Order Completion Date & Time • Service Type • Geographic Scope
Retail Analog/Benchmark <p>CLEC Resale POTS / BST Retail POTS CLEC Resale Design / BST Retail Design CLEC UNE Loop & Port Combination - Retail Analog CLEC UNE Loops – Retail Analog CLEC IC Trunks – Retail Analog</p>	

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Enforcement Measurements

PROVISIONING

Report/Measurement:	
Coordinated Customer Conversions	
Definition:	
This category measures the average time it takes BST to disconnect an unbundled loop from the BST switch and cross connect it to a CLEC's equipment. This measurement applies to service orders with and without INP, and where the CLEC has requested BST to provide a coordinated cutover.	
Exclusions:	
<ul style="list-style-type: none"> Any order canceled by the CLEC will be excluded from this measurement. Delays due to CLEC following disconnection of the unbundled loop Unbundled Loops where there is no existing subscriber loop 	
Business Rules:	
Where the service order includes INP, the interval includes the total time for the cutover including the translation time to place the line back in service on the ported line. The interval is calculated for the entire cutover time for the service order and then divided by items worked in that time to give the average per item interval for each service order.	
Calculation:	
[(Completion Date and Time for Cross Connection of an Unbundled Loop)- (Disconnection Date and Time of an Unbundled Loop)] / Total Number of Unbundled Loop Items for the reporting period.	
Report Structure:	
<ul style="list-style-type: none"> CLEC Specific CLEC Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> Product Reporting Levels <ul style="list-style-type: none"> UNE Loops without INP UNE Loops with INP Geographic Scope <ul style="list-style-type: none"> State 	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> Report Month CLEC Order Number Committed Due Date Service Type Cutover Start Time Cutover Completion time Portability start and completion times (INP Orders) Total Items 	
Retail Analog/Benchmark:	
Benchmark for UNE Loop and NP	

BellSouth
Enforcement Measurements

PROVISIONING

Report/Measurement:	
% Provisioning Troubles within 4 days of Service Order Activity	
Definition:	
Percent Provisioning Troubles within 4 days of Installation measures the quality and accuracy of installation activities.	
Exclusions:	
<ul style="list-style-type: none"> • Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (R Orders, Test Orders, etc.) • Disconnect & From orders 	
Business Rules:	
<p>Measures the quality and accuracy of completed orders. The first trouble report from a service order after completion is counted in this measure. Subsequent trouble reports are measured in Repeat Report Rate. Reports are calculated by searching in the prior report period for completed service orders and following 4 days after completion for a trouble report.</p> <p>Disconnect & From orders are excluded as there is no subsequent activity following a disconnect.</p>	
Calculation:	
$\% \text{ Provisioning Troubles within 4 days of Service Order Activity} = \frac{\text{Trouble reports on all completed orders 4 days following service order(s) completion}}{\text{All Service Orders completed in the report calendar month}} \times 100$	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate • BST Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS ➢ Resale Design ➢ UNE Loop & Port Combination ➢ UNE Loops • Geographic Scope <ul style="list-style-type: none"> ➢ State 	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report Month • CLEC Order Number and PON • Order Submission Date • Order Submission Time • Status Type • Status Notice Date • Standard Order Activity • Geographic Scope 	<ul style="list-style-type: none"> • Report Month • BST Order Number • Order Submission Date • Order Submission Time • Status Type • Status Notice Date • Standard Order Activity • Geographic Scope
Retail Analog/Benchmark:	
<p>CLEC Resale POTS / BST Retail POTS</p> <p>CLEC Resale Design / BST Retail Design</p> <p>CLEC UNE Loop & Port Combination - Retail Analog</p> <p>CLEC UNE Loops – Retail Analog</p>	

BellSouth
Enforcement Measurements

MAINTENANCE & REPAIR

Report/Measurement:	
Missed Repair Appointments	
Definition:	
The percent of trouble reports not cleared by the committed date and time.	
Exclusions:	
<ul style="list-style-type: none"> • Trouble tickets canceled at the CLEC request. • BST trouble reports associated with internal or administrative service. • Customer Provided Equipment (CPE) troubles or CLEC Equipment Trouble. 	
Business Rules:	
<p>The negotiated commitment date and time is established when the repair report is received. The cleared time is the date and time that BST personnel clear the trouble and closes the trouble report in his/her Computer Access Terminal (CAT) or workstation. If this is after the Commitment time, the report is flagged as a "Missed Commitment" or a missed repair appointment. When the data for this measure is collected for BST and a CLEC, it can be used to compare the percentage of the time repair appointments are missed due to BST reasons. Note: Appointment intervals vary with force availability in the POTS environment. Specials and Trunk intervals are standard interval appointments of no greater than 24 hours.</p>	
Calculation:	
$\text{Percentage of Missed Repair Appointments} = \frac{\Sigma (\text{Count of Customer Troubles Not Cleared by the Quoted Commitment Date and Time})}{\Sigma (\text{Total Trouble reports closed in Reporting Period})} \times 100$	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate • BST Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS ➢ Resale DESIGN ➢ UNE Loop & Port Combination ➢ UNE Loops • Geographic Scope <ul style="list-style-type: none"> ➢ State 	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report Month • CLEC Company Name • Submission Date & Time • Completion Date • Service Type • Disposition and Cause • Geographic Scope 	<ul style="list-style-type: none"> • Report Month • BST Company Code • Submission Date & Time • Completion Date • Service Type • Disposition and Cause (Non-Design / Non-Special Only) • Trouble Code (Design and Trunking Services) • Geographic Scope
Retail Analog/Benchmark	
<p>CLEC Resale POTS / BST Retail POTS CLEC Resale Design / BST Retail Design CLEC UNE Loop & Port Combination - Retail Analogue CLEC UNE Loops - Retail Analog</p>	

BellSouth
Enforcement Measurements

MAINTENANCE & REPAIR

Report/Measurement:	
Customer Trouble Report Rate	
Definition:	
Initial and repeated customer direct or referred troubles reported within a calendar month per 100 lines/circuits in service.	
Exclusions:	
<ul style="list-style-type: none"> • Trouble tickets canceled at the CLEC request. • BST trouble reports associated with administrative service. • Customer provided Equipment (CPE) troubles or CLEC equipment troubles. 	
Business Rules:	
Customer Trouble Report Rate is computed by accumulating the number of maintenance, initial and repeated, trouble reports during the reporting period. The resulting number of trouble reports are divided by the total "number of service" lines, ports that exist for the CLEC(s) and BST respectively at the end of the report month.	
Calculation:	
Customer Trouble Report Rate = (Total Count of Initial and Repeated Trouble Reports in the Current Period) / (Total Number of Service Access Lines in service at End of the Report Period) X 100	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate • BST Aggregate. 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS ➢ Resale DESIGN ➢ UNE Loop & Port Combination (This can not be captured for Customer Trouble Report Rate) ➢ UNE Loops • Geographic Scope <ul style="list-style-type: none"> ➢ State 	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report Month • CLEC Company Name • Ticket Submission Date & Time • Ticket Completion Date • Service Type • Disposition and Cause • # Service Access Lines in Service at the end of period • Geographic Scope 	<ul style="list-style-type: none"> • Report Month • BST Company Code • Ticket Submission Date & Time • Ticket Completion Date • Service Type • Disposition and Cause (Non-Design / Non-Special Only) • Trouble Code (Design and Trunking Services) • # Service Access Lines in Service at the end of period • Geographic Scope
Retail Analog/Benchmark:	
CLEC Resale POTS / BST Retail POTS CLEC Resale Design / BST Retail Design CLEC UNE Loop & Port Combination - Retail Analogue CLEC UNE Loops – Retail Analog	

MAINTENANCE & REPAIR

Report/Measurement:	
Maintenance Average Duration	
Definition:	
The Average duration of Customer Trouble Reports from the receipt of the Customer Trouble Report to the time the trouble report is cleared.	
Exclusions:	
<ul style="list-style-type: none"> • Trouble reports canceled at the CLEC request • BST trouble reports associated with administrative service • Customer Provided Equipment (CPE) troubles or CLEC Equipment Troubles. • Trouble reports greater than 10 days 	
Business Rules:	
For Average Duration the clock starts on the date and time of the receipt of a correct repair request. The clock stops on the date and time the service is restored (when the technician completes the trouble ticket on his/her CAT or work system).	
Calculation:	
Maintenance Average Duration = $\Sigma[(\text{Date and Time of Service Restoration}) - (\text{Date and Time Trouble Ticket was Opened})] / (\text{Total Closed Troubles in the reporting period})$	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Specific • BST Aggregate • CLEC Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS ➢ Resale DESIGN ➢ UNE Loop & Port Combination ➢ UNE Loops ➢ IC Trunks • Geographic Scope <ul style="list-style-type: none"> ➢ State 	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report Month • Total Tickets • CLEC Company Name • Ticket Submission Date & Time • Ticket Completion Date • Service Type • Disposition and Cause • Geographic Scope 	<ul style="list-style-type: none"> • Report Month • Total Tickets • BST Company Code • Ticket Submission Date • Ticket submission Time • Ticket completion Date • Ticket Completion Time • Total Duration Time • Service Type • Disposition and Cause (Non – Design / Non-Special Only) • Trouble Code (Design and Trunking Services) • Geographic Scope
Retail Analog/Benchmark:	
CLEC Resale POTS / BST Retail POTS CLEC Resale Design / BST Retail Design CLEC UNE Loop & Port Combination - Retail Analog CLEC UNE Loops – Retail Analog IC Trunks – Retail Analog	

BellSouth
Enforcement Measurements

MAINTENANCE & REPAIR

Report/Measurement:	
Percent Repeat Troubles within 30 Days	
Definition:	
Trouble reports on the same line/circuit as a previous trouble report received within 30 calendar days as a percent of total troubles reported.	
Exclusions:	
<ul style="list-style-type: none"> • Trouble Reports canceled at the CLEC request • BST Trouble Reports associated with administrative service • Customer Provided Equipment (CPE) Troubles or CLEC Equipment Troubles. 	
Business Rules:	
Includes Customer trouble reports received within 30 days of an original Customer trouble report.	
Calculation:	
$\text{Percentage of Missed Repair Appointments} = (\text{Count of Customer Troubles where more than one trouble report was logged for the same service line within a continuous 30 days}) / (\text{Total Trouble Reports Closed in Reporting Period}) \times 100$	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate • BST Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ Resale POTS ➢ Resale DESIGN ➢ UNE Loop & Port Combination ➢ UNE Loops • Geographic Scope <ul style="list-style-type: none"> ➢ State 	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report Month • Total Tickets • CLEC Company Name • Ticket Submission Date & Time • Ticket Completion Date • Total and Percent Repeat Trouble Reports within 30 Days • Service Type • Disposition and Cause • Geographic Scope 	<ul style="list-style-type: none"> • Report Month • Total Tickets • BST Company Code • Ticket Submission Date • Ticket Submission Time • Ticket Completion Date • Ticket Completion Time • Total and Percent Repeat Trouble Reports within 30 days • Service Type • Disposition and Cause (Non – Design/ Non-Special only) • Trouble Code (Design and Trunking Services) • Geographic Scope
Retail Analog/Benchmark:	
CLEC Resale POTS / BST Retail POTS CLEC Resale Design / BST Retail Design CLEC UNE Loop & Port Combination - Retail Analogue CLEC UNE Loops – Retail Analog	

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Enforcement Measurements

BILLING

Report/Measurement:	
Invoice Accuracy (Billing Accuracy)	
Definition:	
This measure provides the percentage of accuracy of the billing invoices rendered to CLECs during the current month.	
Exclusions:	
<ul style="list-style-type: none"> Adjustments not related to billing errors (e.g., credits for service outage, special promotion credits, adjustments to satisfy the customer) 	
Business Rules:	
The accuracy of billing invoices delivered by BST to the CLEC must enable them to provide a degree of billing accuracy comparative to BST bills rendered to retail customers. The BellSouth Billing verification process includes manually analyzing a sample of local bills from each bill period. The bill verification process draws from a mix of different customer billing options and types of service. An end-to-end auditing process is performed for new products and services. Internal measurements and controls are maintained on all billing processes.	
Calculation:	
$\text{Invoice Accuracy} = (\text{Total Billed Revenues during current month}) - (\text{Billing Related Adjustments during current month}) / \text{Total Billed Revenues during current month} \times 100$	
Report Structure:	
<ul style="list-style-type: none"> CLEC Aggregate BST Aggregate 	
Level of Disaggregation :	
<ul style="list-style-type: none"> Geographic Scope <ul style="list-style-type: none"> Region 	
Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
<ul style="list-style-type: none"> Report Month Invoice Type Total Billed Revenue Billing Related Adjustments 	<ul style="list-style-type: none"> Report Month Retail Type <ul style="list-style-type: none"> CRIS CABS Total Billed Revenue Billing Related Adjustments
Retail Analog/Benchmark	
Retail Analog	

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Enforcement Measurements

BILLING

Report/Measurement:	
Mean Time to Deliver Invoices (Billing Timeliness)	
Definition:	
This measure provides the mean interval for the delivery of billing invoices	
Exclusions:	
Any invoices rejected due to formatting or content errors.	
Business Rules:	
Measures the mean interval for timeliness of billing records delivered to CLECs in an agreed upon format. CRIS-based invoices are measured in business days, and CABS-based invoices in calendar days.	
Calculation:	
Mean Time To Deliver Invoices = $\Sigma [(Invoice\ Transmission\ Date) - (Close\ Date\ of\ Scheduled\ Bill\ Cycle)] / (Count\ of\ Invoices\ Transmitted\ in\ Reporting\ Period)$	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Aggregate • BST Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Geographic Scope <ul style="list-style-type: none"> ➤ Region 	
Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
<ul style="list-style-type: none"> • Report Month • Invoice Type • Invoice Transmission Count • Date of Scheduled Bill Close 	<ul style="list-style-type: none"> • Report Month • Retail Type <ul style="list-style-type: none"> ➤ CRIS ➤ CABS • Invoice Transmission Count • Date of Scheduled Bill Close
Retail Analog/Benchmark:	
Retail Analog	

BellSouth
Enforcement Measurements

BILLING

Report/Measurement:	
Usage Data Delivery Accuracy	
Definition:	
This measurement captures the percentage of recorded usage that is delivered error free and in an acceptable format to the appropriate CLEC. These percentages will provide the necessary data for use as a comparative measurement for BellSouth performance. This measurement captures Data Delivery Accuracy rather than the accuracy of the individual usage recording.	
Exclusions:	
None	
Business Rules:	
The accuracy of the data delivery of usage records delivered by BST to the CLEC must enable them to provide a degree of accuracy comparative to BST bills rendered to their retail customers. If errors are detected in the delivery process, they are investigated, evaluated and documented. Errors are corrected and the data retransmitted to the CLEC.	
Calculations:	
$\text{Usage Data Delivery Accuracy} = \Sigma [(\text{Total number of usage data packs sent during current month}) - (\text{Total number of usage data packs requiring retransmission during current month})] / (\text{Total number of usage data packs sent during current month}) \times 100$	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Aggregate • BST Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Geographic Scope <ul style="list-style-type: none"> ➢ Region 	
Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
<ul style="list-style-type: none"> • Report Month • Record Type <ul style="list-style-type: none"> ➢ BellSouth Recorded ➢ Non BellSouth Recorded 	<ul style="list-style-type: none"> • Report Month • Record Type
Retail Analog/Benchmark:	
Retail Analog	

BellSouth
Enforcement Measurements

BILLING

Report/Measurement:	
Usage Data Delivery Timeliness	
Definition:	
This measurement provides a percentage of recorded usage data (usage recorded by BST and usage recorded by other companies and sent to BST for billing) that is delivered to the appropriate CLEC within six (6) calendar days from the receipt of the initial recording. A comparative measure is also provided showing timeliness of BST messages processed and transmitted via CMDS. Timeliness, Completeness and Mean Time to Deliver Usage measures are reported on the same report.	
Exclusions:	
None	
Business Rules:	
The purpose of this measurement is to demonstrate the level of timeliness for processing and transmission of usage data delivered to the appropriate CLEC. The usage data will be mechanically transmitted or mailed to the CLEC data processing center once daily. The Timeliness interval of usage recorded by other companies is measured from the date BST receives the records to the date BST distributes to the CLEC. Method of delivery is at the option of the CLEC.	
Calculation:	
Usage Data Delivery Timeliness = (Total number of usage records sent within six (6) calendar days from initial recording/receipt) / (Total number of usage records sent) X 100	
Report Structure:	
<ul style="list-style-type: none"> • CLEC Aggregate • BST Aggregate 	
Level of Disaggregation:	
<ul style="list-style-type: none"> • Geographic Scope <ul style="list-style-type: none"> ➤ Region 	
Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
<ul style="list-style-type: none"> • Report Month • Record Type <ul style="list-style-type: none"> ➤ BellSouth Recorded ➤ Non-BellSouth Recorded 	<ul style="list-style-type: none"> • Report Monthly • Record Type
Retail Analog/Benchmark:	
Retail Analog	

BellSouth
Enforcement Measurements

TRUNK GROUP PERFORMANCE

Report/Measurement:	
Trunk Group Service Report	
Definition:	
A report of the percent blocking above the Measured Blocking Threshold (MBT) on all final trunk groups between CLEC Points of Termination and BST end offices or tandems.	
Exclusions:	
<ul style="list-style-type: none"> • Trunk groups for which valid traffic data is not available • High use trunk groups 	
Business Rules:	
<p>Traffic trunking data measurements are validated and processed by the Total Network Data System/Trunking (TNDS/TK), a Telcordia (BellCore) supported application, on an hourly basis for Average Business Days (Monday through Friday). The traffic load sets, including offered load and observed blocking ratio (calls blocked divided by calls attempted), are averaged for a 20 day period, and the busy hour is selected. The busy hour average data for each trunk group is captured for reporting purposes. Although all trunk groups are available for reporting, the report highlight those trunk groups with blocking greater than the Measured Blocking Threshold (MBT) and the number of consecutive monthly reports that the trunk group blocking has exceeded the MBT. The MBT for CTTG is 2% and the MBT for all other trunk groups is 3%.</p>	
Calculation:	
Measured blocking = (Total number of blocked calls) / (Total number of attempted calls) X 100	
Report Structure:	
<ul style="list-style-type: none"> • BST Aggregate <ul style="list-style-type: none"> ➢ CTTG ➢ Local • CLEC Aggregate <ul style="list-style-type: none"> ➢ BST Administered CLEC Trunk ➢ CLEC Administered CLEC Trunk • CLEC Specific <ul style="list-style-type: none"> ➢ BST Administered CLEC Trunk ➢ CLEC Administered CLEC Trunk 	
Level of Disaggregation:	
State	
Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
<ul style="list-style-type: none"> • Report month • Total trunk groups • Total trunk groups for which data is available • Trunk groups with blocking greater than the MBT • Percent of trunk groups with blocking greater than the MBT 	<ul style="list-style-type: none"> • Report month • Total trunk groups • Total trunk groups for which data is available • Trunk groups with blocking greater than the MBT • Percent of trunk groups with blocking greater than the MBT
Retail Analog/Benchmark:	
Retail Analog	

BellSouth
Enforcement Measurements

LNP

Report/Measurement :
Average Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution
Definition:
Disconnect Timeliness is defined as the interval between the time the LNP Gateway receives the 'Number Ported' message from NPAC (signifying the CLEC 'Activate') until the time that the Disconnect service order for an LSR is completed in SOCS. This interval effectively measures BST responsiveness by isolating it from impacts that are caused by CLEC related activities.
Exclusions:
<ul style="list-style-type: none"> • Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable. • "L" Appointment code orders (indicating the customer has requested a later than offered interval)
Business Rules:
The Disconnect Timeliness interval is determined for the last Disconnect service order processed on an LSR during the reporting period. The Disconnect Timeliness interval is the elapsed time from when BST receives the last 'Number Ported' message for an LSR from NPAC (signifying the CLEC 'Activate') until the last Disconnect service order is completed in SOCS. Elapsed time for each order is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the total number of selected disconnect orders which have been completed. Mechanized (service orders generated by LSRs submitted via EDI or TAG)
Calculation :
Average Disconnect Timeliness Interval: $[(\text{Disconnect Service Order Completion Date \& Time}) - (\text{'Number Ported' Message Received Date \& Time})] / \Sigma (\text{Total Number of Disconnect Service Orders Completed in Reporting Period})$
Disconnect Timeliness Interval Distribution: $[\Sigma (\text{Disconnect Service Orders Completed in "X" days}) / (\text{Total Disconnect Service Orders Completed in Reporting Period})] \times 100$
Report Structure:
<ul style="list-style-type: none"> • CLEC Specific • CLEC Aggregate
Level of Disaggregation:
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ LNP • Geographic Scope <ul style="list-style-type: none"> ➢ State
Retail Analog/Benchmark:
Benchmark is underdevelopment

BellSouth
Enforcement Measurements

LNP

Report/Measurement:
Percent Missed Installation Appointments
Definition:
Percent Missed Installation Appointments monitors the reliability of BST commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customer as compared to BST.
Exclusions:
<ul style="list-style-type: none"> • Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable.
Business Rules:
Percent Missed Installation Appointments (PMI) is the percentage of total orders processed for which BST is unable to complete the service order on the committed due date. Missed Appointments caused by end-user reasons will be included and reported in a separate category. A business day is any time period within the same date frame, which means there cannot be a cutoff time for commitments as certain types of orders are requested to be worked after standard business hours. Also, during Daylight Savings Time, field technicians are scheduled until 9PM in some areas and the customer is offered a greater range of intervals from which to select.
Calculation:
Percent Missed Installation Appointments: $\left[\frac{\text{(Number of Orders Not Completed by Committed Due Date in Reporting Period)}}{\text{(Number of Orders Completed in Reporting Period)}} \right] \times 100$
Report Structure:
<ul style="list-style-type: none"> • Mechanized (service orders generated by LSRs submitted via EDI or TAG) • CLEC Specific • CLEC Aggregate <p>Report explanation: Total Missed Appointments is the total % of orders missed either by BST or the CLEC end user. End User MA represents the percentage of orders missed by the CLEC end user. The difference between End User Missed Appointments and Total Missed Appointments is the number of BST caused misses.</p>
Level of Disaggregation:
<ul style="list-style-type: none"> • Product Reporting Levels <ul style="list-style-type: none"> ➢ LNP • Geographic Scope <ul style="list-style-type: none"> ➢ State
Retail Analog/Benchmark:
Benchmark is underdevelopment

BellSouth
Enforcement Measurements

COLLOCATION

Report/Measurement:
Collocation/Percent of Due Dates Missed
Definition:
Measures the percent of missed due dates for collocation arrangements.
Exclusions:
<ul style="list-style-type: none"> Any Bona Fide firm order cancelled by the CLEC Bona Fide firm orders to augment previously completed arrangements Time for BST to obtain permits Time during which the collocation contract is being negotiated
Business Rules:
The clock starts on the date that BST receives a complete and accurate Bona Fide firm order accompanied by the appropriate fee. The clock stops on the date that BST completes the collocation arrangement.
Calculation:
$\% \text{ of Due Dates Missed} = \Sigma (\text{Number of Orders not completed by the BST Committed Due Date during Reporting Period}) / \text{Number of Orders Completed in Reporting Period}) \times 100$
Report Structure:
<ul style="list-style-type: none"> CLEC Specific CLEC Aggregate
Level of Disaggregation:
<ul style="list-style-type: none"> State Physical
Data Retained:
<ul style="list-style-type: none"> Report period Aggregate data
Retail Analog/Benchmark:
Benchmark

Statistical Methods for BellSouth Performance Measure Analysis

I. Necessary Properties for a Test Methodology

The statistical process for testing if competing local exchange carriers (CLECs) customers are being treated equally with BellSouth (BST) customers involves more than just a mathematical formula. Three key elements need to be considered before an appropriate decision process can be developed. These are

- the type of data,
- the type of comparison, and
- the type of performance measure.

Once these elements are determined a test methodology should be developed that complies with the following properties.

- Like-to-Like Comparisons. When possible, data should be compared at appropriate levels, e.g. wire center, time of month, dispatched, residential, new orders. The testing process should:
 - Identify variables that may affect the performance measure.
 - Record these important confounding covariates.
 - Adjust for the observed covariates in order to remove potential biases and to make the CLEC and the ILEC units as comparable as possible.
- Aggregate Level Test Statistic. Each performance measure of interest should be summarized by one overall test statistic giving the decision maker a rule that determines whether a statistically significant difference exists. The test statistic should have the following properties.
 - The method should provide a single overall index, on a standard scale.
 - If entries in comparison cells are exactly proportional over a covariate, the aggregated index should be very nearly the same as if comparisons on the covariate had not been done.
 - The contribution of each comparison cell should depend on the number of observations in the cell.
 - Cancellation between comparison cells should be limited.
 - The index should be a continuous function of the observations.
- Production Mode Process. The decision system must be developed so that it does not require intermediate manual intervention, i.e. the process must be a “black box.”
 - Calculations are well defined for possible eventualities.

- The decision process is an algorithm that needs no manual intervention.
- Results should be arrived at in a timely manner.
- The system must recognize that resources are needed for other performance measure-related processes that also must be run in a timely manner.
- The system should be auditable, and adjustable over time.
- **Balancing.** The testing methodology should balance Type I and Type II Error probabilities.
 - $P(\text{Type I Error}) = P(\text{Type II Error})$ for well defined null and alternative hypotheses.
 - The formula for a test's balancing critical value should be simple enough to calculate using standard mathematical functions, i.e. one should avoid methods that require computationally intensive techniques.
 - Little to no information beyond the null hypothesis, the alternative hypothesis, and the number of observations should be required for calculating the balancing critical value.

In the following sections we describe appropriate testing processes that adhere as much as possible to the testing principles.

Measurement Types

The performance measures that will undergo testing are of three types:

- 1) means
- 2) proportions, and
- 3) rates

While all three have similar characteristics (a proportion is the average of a measure that takes on only the values of 0 or 1), a proportion or rate is derived from count data while a mean is generally an average of interval measurements.

II. Testing Methodology – The Truncated Z

Many covariates are chosen in order to provide deep comparison levels. In each comparison cell, a Z statistic is calculated. The form of the Z statistic may vary depending on the performance measure, but it should be distributed approximately as a standard normal, with mean zero and variance equal to one. Assuming that the test

statistic is derived so that it is negative when the performance for the CLEC is worse than for the ILEC, a positive truncation is done – i.e. if the result is negative it is left alone, if the result is positive it is changed to zero. A weighted average of the truncated statistics is calculated where a cell weight depends on the volume of BST and CLEC orders in the cell. The weighted average is re-centered by the theoretical mean of a truncated distribution, and this is divided by the standard error of the weighted average. The standard error is computed assuming a fixed effects model.

Proportion Measures

For performance measures that are calculated as a proportion, in each adjustment cell, the truncated Z and the moments for the truncated Z can be calculated in a direct manner. In adjustment cells where proportions are not close to zero or one, and where the sample sizes are reasonably large, a normal approximation can be used. In this case, the moments for the truncated Z come directly from properties of the standard normal distribution. If the normal approximation is not appropriate, then the Z statistic is calculated from the hypergeometric distribution. In this case, the moments of the truncated Z are calculated exactly using the hypergeometric probabilities.

Rate Measures

The truncated Z methodology for rate measures has the same general structure for calculating the Z in each cell as proportion measures. For a rate measure, there are a fixed number of circuits or units for the CLEC, n_{2j} and a fixed number of units for BST, n_{1j} . Suppose that the performance measure is a “trouble rate.” The modeling assumption is that the occurrence of a trouble is independent between units and the number of troubles in n circuits follows a Poisson distribution with mean λn where λ is the probability of a trouble in 1 circuit and n is the number of circuits.

In an adjustment cell, if the number of CLEC troubles is greater than 15 and the number of BST troubles is greater than 15, then the Z test is calculated using the normal approximation to the Poisson. In this case, the moments of the truncated Z come directly from properties of the standard normal distribution. Otherwise, if there are very few troubles, the number of CLEC troubles can be modeled using a binomial distribution with n equal to the total number of troubles (CLEC plus BST troubles.) In this case, the moments for the truncated Z are calculated explicitly using the binomial distribution.

Mean Measures

For mean measures, an adjusted t statistic is calculated for each like-to-like cell which has at least 7 BST and 7 CLEC transactions. A permutation test is used when one or both of the BST and CLEC sample sizes is less than 6. Both the adjusted t statistic and the permutation calculation are described in the technical appendix.